

Papahānaumokuākea Marine National Monument Permit Application Cover Sheet

This Permit Application Cover Sheet is intended to provide summary information and status to the public on permit applications for activities proposed to be conducted in the Papahānaumokuākea Marine National Monument. While a permit application has been received, it has not been fully reviewed nor approved by the Monument Management Board to date. The Monument permit process also ensures that all environmental reviews are conducted prior to the issuance of a Monument permit.

Summary Information

Applicant Name: O'Malley, Joseph, M.

Affiliation: Joint Institute for Atmospheric Research/Research Corporation of the University of Hawaii
Pacific Islands Fisheries Science Center/National Marine Fisheries Service
University of Hawaii, Manoa, Department of Zoology

Permit Category: Research

Proposed Activity Dates: August 2, 2008-September 5, 2008

Proposed Method of Entry (Vessel/Plane): Vessel

Proposed Locations:

Bank locations: Necker Island, Gardner Pinnacles, Maro Reef and Laysan Island.

Locations within banks: all activities will take place outside of 3 nm from land or emergent reef.

Approximate primary depths: 30 - 50 meters.

Habitat type: low relief pavement, sand and rubble.

Estimated number of individuals (including Applicant) to be covered under this permit:

7-8

Estimated number of days in the Monument: 31

Description of proposed activities: (complete these sentences):

a.) The proposed activity would...

The proposed activity is a continuation of the NWHI lobster tagging research project with spiny lobsters (*Panulirus marginatus*) and slipper lobsters (*Scyllarides squammosus*) conducted annually in the NWHI since 2002. The research will continue to provide bank-specific life history parameter estimates (growth rates, mortality, nutritional condition, trophic level feeding patterns, movement) and population-level information (density, size structure, size at maturity) for population and ecosystem modeling. The research will also document important spatial and temporal variability in these parameters.

b.) To accomplish this activity we would

To accomplish this activity we will continue to recapture the 51,000 spiny lobsters (*Panulirus marginatus*) and 27,000 slipper lobsters (*Scyllarides squammosus*) that have been tagged during previous tagging cruises at Necker Island, Gardner Pinnacles, Maro Reef and Laysan Island. The project also aims to tag and safely release as many spiny and slipper lobsters as possible in the limited amount of time spent in the NWHI. To understand the association among growth rates, nutritional condition and trophic level feeding patterns 25 individuals/species/bank (200 total) will be sampled for laboratory analysis.

c.) This activity would help the Monument by ...

This activity would help the monument by providing detailed life history and population-level information on an important component of the NWHI coral reef benthic ecosystem. The primary objectives are to understand the meta-population dynamics of lobster populations and to identify factors that influence these dynamics within the archipelago. The individual- and population-level information will also provide the necessary species-specific inputs for ecosystem models.

Other information or background: It is important to note that the NMFS/PIFSC annual NWHI lobster resource cruise will not be taking place this year. This tagging cruise will be the only source of information regarding lobsters therefore keeping one of the longest time series in the NWHI (23 years) intact.